

Blended learning in a Master's Programme in Multimedia in Education - a critical view

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Abstract:

In 2002, the University of Aveiro started a master's programme in Multimedia in Education. Since then, this programme has grown to become one of the most successful post-graduation programmes of this University, with an average of more than 11 applicants for each available position and 5 editions in just 3 years.

The main target audience for this programme are primary and secondary school teachers, although some higher education staff and professionals from multimedia editorial companies also apply. Having that in mind, the operational model adopted has some features selected to match the constraints of the target public, namely a sequential approach to courses and a blended learning strategy, heavily relying on eLearning technologies to help students and staff fulfil their tasks. This paper presents the main characteristics of the model adopted and discusses its strengths and weaknesses based on an evaluation study whose framework, parameters and methodology are also presented.

1. Background

Created in 2002, the course was offered to a group of 65 students, 20 in the MA degree and the remaining in its post-graduation version, with an intake of students from Madeira and continental Portugal – this edition of the course was given to the Madeira students with a time lag of a fortnight, given that face-to-face sessions could not coincide, thus preventing students from having to fly to Portugal to attend classes. Teachers went there instead, thus minimising costs. The following year the course was offered to 58 students, again only taking in 20 MA students, but this time only for continental Portugal. 2004 was the year the course was offered both in Aveiro and Leiria, in the centre of Portugal, again

to 58 students overall, with 20 doing their MA degrees. The 2005 edition is only being offered to Cape Verde, with an intake of 20 MA students, a course that will start in February 2006, with financing from the Gulbenkian Foundation.

The reasons for the success of the course can be partially explained by the model adopted for its structure – blended learning.

2. The blended learning model

An early decision was taken that this master's programme should be organized based on a hybrid face-to-face/distance, i.e. blended, model. This decision was taken in order to propose an offer well suited to the target audience elected, mainly professionals from the educational system and from industry, most of them needing to keep going on with their jobs in parallel with attending the programme.

The Master's programme is, as any other similar programme according to the (still) current Portuguese law, organized in 2 years: the first is a curricular year composed by several semester courses and the second year is devoted to the preparation of a dissertation that should, afterwards, be discussed in a public examination by an academic tribunal that includes 3 or 4 experts, of which at least 1 external to the university offering the master's programme. The master's programme of the University of Aveiro has the curricular structure shown in table 1.

Table 1: Curricular structure of the master's programme in Multimedia in Education of the University of Aveiro.

		Course topic	Mandatory/Optional	Credits
1 st year	1 st sem	Development of Educational Multimedia	M	3
		Communication Technologies in Education	M	3
		Distributed Learning Management Environments	M	3
		Educational Software Evaluation	O	1,5
		Interaction Design	O	1,5
	2 nd sem	Multimedia and Cognitive Architectures	M	3
		Distributed Learning Communities	M	3
		Seminar (dissertation project)	M	3
2 nd year		Dissertation	M	-

One of the problems that professionals face when following post-graduation programmes is the need to follow several simultaneous courses. This usually results in a very difficult task, because of the limited resources (time, physical and mental availability) they can put on this task. For this reason, a decision was taken to avoid simultaneous lecturing of different courses, so the courses are run in the order presented in table 1. Each course topic has an average duration of 4 working weeks, with the exception of Seminar that lasts for 8 working weeks. During each period of 4 working weeks the amount of effort requested from the learner is equivalent to that requested in a regular 13-week semester, with several topics being run in parallel, as used in the Portuguese higher education system.

Each course is pedagogically organised on a learner centred basis. This is achieved by an activity oriented work plan, which drives the attention of learners through a set of challenges that are directed towards learning objectives and outcomes. For each activity an initial set of learning resources are provided, but research on further information resources is strongly recommended and actively promoted.

Each course includes two one daylong face-to-face sessions. The first session is held on the end of the first week, after some preparatory work is proposed to the learners. Usually this first effort is on an individual basis and relates to some basic readings and initial on-line discussions about the topics under study. The face-to-face session is used to present and discuss the concepts underlying the course programme, and to organize the distance based work that will be held in the following weeks, including group organisation, assignment identification, schedule negotiation and interaction strategies.

During the second and third working weeks, the groups will carry their work, based on individual effort and on-line discussions. Asynchronous interaction based on discussion groups is privileged because it allows for time and space flexibility. However, learners are free to use synchronous communication, although experience tells that this kind of tool is used only to support short discussions mainly related with logistics issues (who does what, time organization, resource identification, etc) or to quickly generate consensus relating to “long” lasting unsolved issues.

At the end of week 3 learners are supposed to have produced a synthesis report on the assigned topic. Tutors should provide some formal feedback that will be used by learners to produce a final version of the report.

The second face-to-face session is held at the end of the fourth working week. In this session learners will present the results of their group work, followed by a public discussion with tutors and other learners. If required by the course coordinator, this session may also include a written examination.

Figure 1 depicts a synthesis of the organisational model adopted on each course of the master's programme on Multimedia in Education of the University of Aveiro.

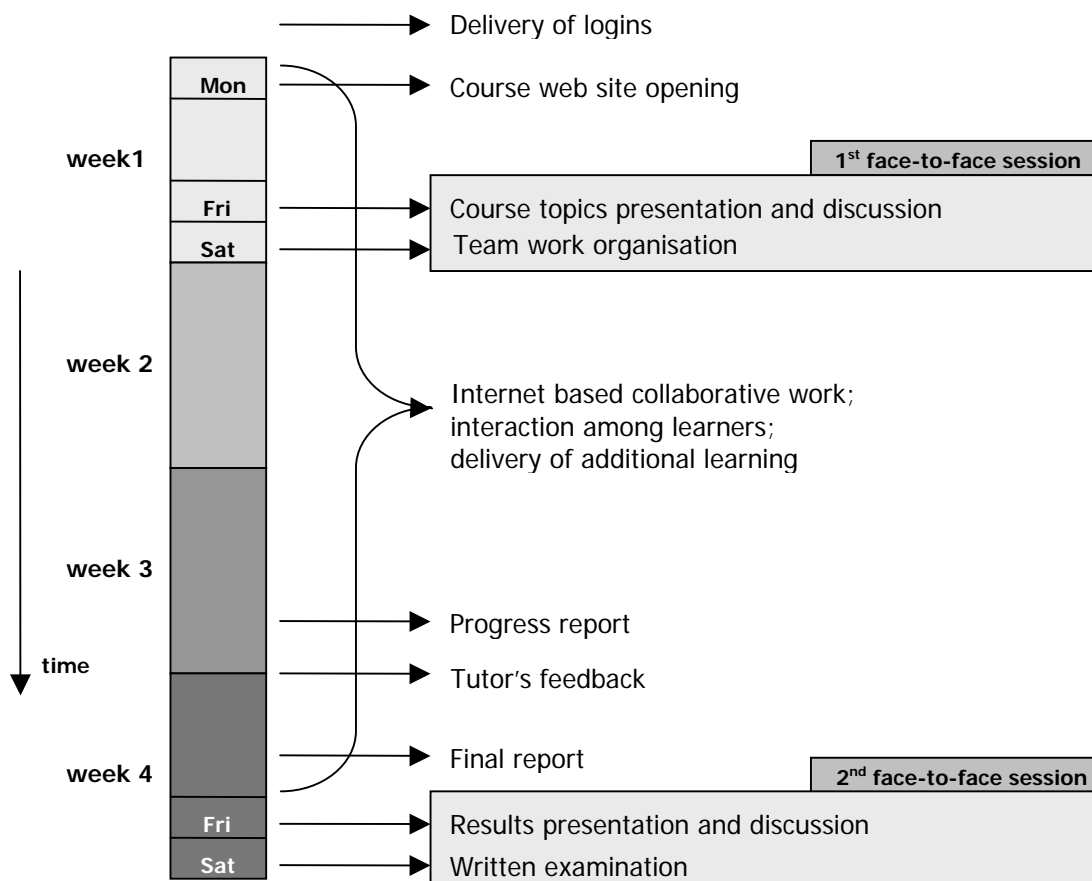


Figure 1: Operational model of each course of the master's programme in Multimedia in Education of the University of Aveiro.

3. A critical view

An extensive research work [Batista, 2004] has been conducted relating the evaluation of this master's programme, aiming at the understanding of relevant organisational and pedagogical drawbacks that could be improved in future editions of the programme.

For this research work an evaluation framework was defined that includes extended evaluation criteria organised under the following categories:

- a) Learner's profile;
- b) Learning model;
- c) Learner's behaviour;
- d) Pedagogical issues;
- e) Technological issues;
- f) Logistics and
- g) Global perception by learners.

The research was based on questionnaires submitted to learners, teaching and support staff, and on interaction statistics provided by the LMS platform used at the time of the study, WebCT™.

The main conclusion from the research is that the majority of learners and teaching staff are very happy with the organisational and pedagogical models adopted. However, learners recommend the increase of face-to-face sessions, which might be due to the lack of experience with a learner centred pedagogical model that is very demanding, namely for persons used to the traditional school model.

One of the most acknowledged characteristics of this programme, by learners, is the sequential nature of lecturing. The fact that, at any specific moment in time, only one course is attracting the attention and effort from learners is a very strong point highlighted by all.

On the other hand, the promotion of collaborative work through the Internet is regarded as a very exciting and effective way of learning, despite the technological and behavioural difficulties that some learners felt during the initial weeks. However, these difficulties were overcome through experience and individual effort, with the support of the technical staff.

Teaching staff is also happy with the results obtained. In general the learning objectives and outcomes are fulfilled, and often overcome. The distributed nature of learning in a rich learning resource environment, such as the Internet, provides a very good basis for the exploration of individual and group interests that, very often, surpass the learning goals defined in the context of the course.

The main drawback for teaching staff is the amount of time required to support learners. Because interaction can be done easily and the courses run under a very demanding schedule, learners tend to interact a lot with tutors. In a 4 working week, 20 learners distributed in 4 groups can easily generate more than 1200 messages in the discussion *fora*, which should be monitored by tutors in order to follow learners' progress and provide appropriate and timely support. The research study also demonstrates that the satisfaction of learners is directly correlated with the quality of support from tutors, perceived both in content as in time delay.

4. Conclusions

The experience of organising and lecturing 5 editions in 3 years of the master's programme in Multimedia in Education at the University of Aveiro confirms that in order to design a successful post-graduation programme special attention must be put on the learners' needs, as far as their learning but also their logistic needs are concerned.

Blended learning, using the Internet communication facilities to support learning resource delivery and access and interaction among learners and tutors, proved to be an effective way to help develop skills and promote knowledge development.

References

- [Baptista, 2004] Baptista, A., *Avaliação do Mestrado em Multimédia em Educação* (Evaluation of the Master's Programme in Multimedia in Education), Master's dissertation, University of Aveiro, 2004.